



Name:			
Enrolment No:			
<b>UNIVERSITY OF PETROLEUM &amp; ENERGY STUDIES</b> <b>DEHRADUN</b> <b>End Semester Examination- Dec 2019</b>			
Program/course : BA (Hons.) Energy Economics (BAEE)		Semester : I	
Subject : Microeconomics I		Max. Marks : 100	
Subject Code : ECON 1002		Duration : 3 Hrs	
Page No. :			
<b>Section A (attempt all)</b>			
<b>Q1. Answer all the questions:</b>			
Using supply-and-demand diagrams, show the effect of the following events on the market for sweatshirts.			
i.	A cyclone in India damages the cotton crop	[4]	CO1
ii.	The price of leather jackets falls.	[4]	CO1
iii.	All colleges require morning exercise in appropriate attire.	[4]	CO1
iv.	New knitting machines are invented.	[4]	CO1
v.	The price of woolen jackets rise.	[4]	CO1
<b>SECTION B</b>			
<b>Answer any four questions</b>			
Q2.	What is the main advantage of using the midpoint method for calculating elasticity?	[5]	CO3, CO4
Q3	How is the price elasticity of supply calculated? Explain what it measures.	[5]	CO3, CO4
Q4.	Examine consumer surplus with diagram.	[5]	CO3, CO4
Q5.	Suppose that a budget equation is given by $P_1X_1 + P_2X_2 = m$ . The government decides to impose a lump-sum tax of $u$ , a quantity tax on good 1 of $t$ , and a quantity subsidy on good 2 of $s$ . What is the formula for the new budget line?	[5]	CO3, CO4
Q6.	What happens to the budget line if the price of good 2 increases, but the price of good 1 and income remain constant?	[5]	CO3, CO4

<b>SECTION C</b>			
<b>Answer any two questions</b>			
Q7.	Explain why convex preferences means that “averages are preferred to extremes.”	[15]	<b>CO3, CO4</b>
Q8.	Illustrate marginal rate of substitution graphically.	[15]	<b>CO3, CO4</b>
Q9.	What is price effect? Prove that price effect is a combination of income and substitution effect.	[15]	<b>CO3, CO4</b>
<b>Section D</b>			
<b>Answer any one question</b>			
Q10	Read the case study and answer all questions	[30]	<b>CO2, CO3, CO4</b>

### **HOW THE ECONOMY AS A WHOLE WORKS**

#### **A Country’s Standard of Living Depends on Its Ability to Produce Goods and Services**

The differences in living standards around the world are staggering. In 2006, the average American had an income of about \$44,260. In the same year, the average Mexican earned \$11,410, and the average Nigerian earned \$1,050. Not surprisingly, this large variation in average income is reflected in various measures of the quality of life. Citizens of high-income countries have more TV sets, more cars, better nutrition, better healthcare, and a longer life expectancy than citizens of low-income countries.

Changes in living standards over time are also large. In the United States, incomes have historically grown about 2 percent per year (after adjusting for changes in the cost of living). At this rate, average income doubles every 35 years. Over the past century, average income has risen about eightfold.

What explains these large differences in living standards among countries and over time? The answer is surprisingly simple. Almost all variation in living standards is attributable to differences in countries’ **productivity**—that is, the amount of goods and services produced from each unit of labor input. In nations where workers can produce a large quantity of goods and services per unit of time, most people enjoy a high standard of living; in nations where workers are less productive, most people endure a more meager existence. Similarly, the growth rate of a nation’s productivity determines the growth rate of its average income.

The fundamental relationship between productivity and living standards is simple, but its implications are far-reaching. If productivity is the primary determinant of living standards, other explanations must be of secondary importance.

For example, it might be tempting to credit labor unions or minimum-wage laws for the rise in living standards of American workers over the past century. Yet the real hero of American workers is their rising productivity. As another example, some commentators have claimed that increased competition from Japan and other countries explained the slow growth in U.S. incomes during the 1970s and 1980s. Yet the real villain was not competition from abroad but flagging productivity growth in the United States.



## In The News

### Why You Should Study Economics

*In this excerpt from a commencement address, the former president of the Federal Reserve Bank of Dallas makes the case for studying economics.*

#### The Dismal Science? Hardly!

By Robert D. McTeer, Jr.

My take on training in economics is that it becomes increasingly valuable as you move up the career ladder. I can't imagine a better major for corporate CEOs, congressmen, or American presidents. You've learned a systematic, disciplined way of thinking that will serve you well. By contrast, the economically challenged must be perplexed than what usually is called the broken window fallacy. Whenever a government program is justified not on its merits but by the jobs it will create, remember the broken window: Some teenagers, being the little beasts that they are, toss a brick through a bakery window. A crowd gathers and laments, "What a shame." But before you know it, someone suggests a silver lining to the situation: Now the baker will have to spend money to have the window repaired. This will add to the income of the repairman, who will spend his additional income, which will add to another seller's income, and so on. You know the drill. The chain of spending will multiply and generate higher income and employment. If the broken window is large enough, it might produce an economic boom!...

about how it is that economies work better the fewer people they have in charge. Who does the planning? Who makes decisions? Who decides what to produce? For my money, Adam Smith's invisible hand is the most important thing you've learned by studying economics. You understand how we can each work for our own self-interest and still produce a desirable social outcome. You know how uncoordinated activity gets coordinated by the market to enhance the wealth of nations. You understand the

Most voters fall for the broken window fallacy, but not economics majors. They will say, "Hey, wait a minute!" If the baker hadn't spent his money on window repair, he would have spent it on the new suit he was saving to buy. Then the tailor would have the new income to spend, and so on. The broken window didn't create net new spending; it just diverted spending from somewhere else. The broken window does not create new activity, just different activity. People see the activity that takes place. They don't see the activity that *would* have taken place.

The broken window fallacy is perpetuated in many forms. Whenever job creation or retention is the primary objective I call it the job-counting fallacy. Economics majors understand the non-intuitive reality that

magic of markets and the dangers of tampering with them too much. You know better what you first learned in kindergarten: that you shouldn't kill or cripple the goose that lays the golden eggs....

Economics training will help you understand fallacies and unintended consequences. In fact, I am inclined to define economics as the study of how to anticipate unintended consequences....

Little in the literature seems more relevant to contemporary economic debates real progress comes from job destruction. It once took 90 percent of our population to grow our food. Now it takes 3 percent. Pardon me, Willie, but are we worse off because of the job losses in agriculture? The would-have-been farmers are now college professors and computer gurus....

So instead of counting jobs, we should make every job count. We will occasionally hit a soft spot when we have a mismatch of supply and demand in the labor market. But that is temporary. Don't become a Luddite and destroy the machinery, or become a protectionist and try to grow bananas in New York City.

Source: *The Wall Street Journal*, June 4, 2003.

The relationship between productivity and living standards also has profound implications for public policy. When thinking about how any policy will affect living standards, the key question is how it will affect our ability to produce goods and services. To boost living standards, policymakers need to raise productivity by ensuring that workers are well educated, have the tools needed to produce goods and services, and have access to the best available technology.

### **Prices Rise When the Government Prints too Much Money**

In January 1921, a daily newspaper in Germany cost 0.30 marks. Less than two years later, in November 1922, the same newspaper cost 70,000,000 marks. All other prices in the economy rose by similar amounts. This episode is one of history's most spectacular examples of **inflation**, an increase in the overall level of prices in the economy.

Although the United States has never experienced inflation even close to that in Germany in the 1920s, inflation has at times been an economic problem. During the 1970s, for instance, when the overall level of prices more than doubled, President Gerald Ford called inflation "public enemy number one." By contrast, inflation in the first decade of the 21st century has run about 2½ percent per year; at this rate, it would take almost 30 years for prices to double. Because high inflation imposes various costs on society, keeping inflation at a low level is a goal of economic policymakers around the world.

What causes inflation? In almost all cases of large or persistent inflation, the culprit is growth in the quantity of money. When a government creates large quantities of the nation's money, the value of the money falls. In Germany in the early 1920s, when prices were on average tripling every month, the quantity of money was also tripling every month. Although less dramatic, the economic history of the United States points to a similar conclusion: The high inflation of the 1970s was associated with rapid growth in the quantity of money, and the low inflation of more recent experience was associated with slow growth in the quantity of money.

### **Society Faces A Short-Run Trade-Off Between Inflation and Unemployment**

Although a higher level of prices is, in the long run, the primary effect of increasing the quantity of money, the short-run story is more complex and controversial. Most economists describe the short-run effects of monetary injections as follows:

- Increasing the amount of money in the economy stimulates the overall level of spending and thus the demand for goods and services.
- Higher demand may over time cause firms to raise their prices, but in the meantime, it also encourages them to hire more workers and produce a larger quantity of goods and services.
- More hiring means lower unemployment.

This line of reasoning leads to one final economy-wide trade-off: a short-run tradeoff between inflation and unemployment.

Although some economists still question these ideas, most accept that society faces a short-run trade-off between inflation and unemployment. This simply means that, over a period of a year or two, many economic policies push inflation and unemployment in opposite directions. Policymakers face this trade-off regardless of whether inflation and unemployment both start out at high levels (as they were in the early 1980s), at low levels (as they were in the late 1990s), or someplace in between. This short-run trade-off plays a key role in the analysis of the **business cycle**—the irregular and largely unpredictable fluctuations in economic activity, as measured by the production of goods and services or the number of people employed.

Policymakers can exploit the short-run trade-off between inflation and unemployment using various policy instruments. By changing the amount that the government spends, the amount it taxes, and the amount of money it prints, policymakers can influence the overall demand for goods and services. Changes in demand in turn influence the combination of inflation and unemployment that the economy experiences in the short-run. Because these instruments of economic policy are potentially so powerful, how policymakers should use these instruments to control the economy, if at all, is a subject of continuing debate.

### **Question:**

- i. List and briefly explain the three principles that describe how the economy as a whole works.

